

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-23. (canceled)

Claim 24. (New) A bone miller system comprising:

a shell configured for insertion within a bone cavity and including a shaft cavity;
a frame shaft configured for sliding reception into the shaft cavity along a longitudinal axis of the shaft cavity;

at least one cutter defining a cutter axis, the at least one cutter including a first drive joint member;

a cutter mount configured to support the at least one cutter such that the cutter axis intersects the longitudinal axis at a first angle;

a drive shaft defining a drive shaft axis, the drive shaft including a proximal end configured to receive rotational force to rotate the drive shaft about the drive shaft axis, and a distal end with a second drive joint member, the second drive joint member configured to operably couple with the first drive joint member to rotate the at least one cutter about the cutter axis; and

a shaft alignment bracket configured to support the drive shaft at a fixed angular relationship with respect to the frame shaft, such that the drive shaft axis intersects the

cutter axis at a second angle, wherein the second angle is about equal to or greater than the first angle.

Claim 25. (New) The bone miller system of claim 24, wherein the at least one cutter comprises a plurality of cutters, each of the plurality of cutters having a diameter different from the diameter of each of the other of the plurality of cutters.

Claim 26. (New) The bone miller system of claim 24, wherein one of the first drive joint member and the second drive joint member comprises a pin and the other of the first drive joint member and the second drive joint member comprises a fork.

Claim 27. (New) The bone miller system of claim 24, further comprising:
a sleeve;
a bore extending through the sleeve and configured to slidably and rotatably receive the drive shaft; and
a guide member for slidably guiding the sleeve with the shaft alignment bracket.

Claim 28. (New) The bone miller system of claim 27, wherein:
the shaft alignment bracket includes an arm portion extending from the frame shaft to a receiver, the receiver sized to slidably support the drive shaft;
the bore is sized to slidably receive the receiver; and
the guide member comprises a slot having a diameter sized to receive the arm portion therethrough.

Claim 29. (New) The bone miller system of claim 28, the sleeve further including:
a notch extending radially from the slot.

Claim 30. (New) The bone miller system of claim 28, the shell further comprising:
a slot extending along the longitudinal axis and sized to slidably receive the arm
portion.

Claim 31. (New) The bone miller system of claim 24, wherein the cutter mount is
fixedly supported by the frame shaft.

Claim 32. (New) A bone miller system comprising:
a frame shaft defining a longitudinal axis;
at least one cutter defining a cutter axis, the at least one cutter including a first
drive joint member;
a drive shaft defining a drive shaft axis, the drive shaft including a proximal end
configured to receive rotational force to rotate the drive shaft about the drive shaft axis,
and a distal end with a second drive joint member, the second drive joint member
configured to operably couple with the first drive joint member to rotate the at least one
cutter about the cutter axis; and
a bracket assembly configured to (i) support the at least one cutter such that the
cutter axis intersects the longitudinal axis at a first angle, and (ii) support the drive shaft

at a fixed angular relationship with respect to the frame shaft, wherein the drive shaft axis is about parallel to the longitudinal axis.

Claim 33. (New) The system of claim 32, further comprising:

a shell configured for insertion within a bone cavity and including a shaft cavity configured for sliding reception of the frame shaft.

Claim 34. (New) The system of claim 33, the shell further comprising:

a slot extending along the shell and sized to slidably receive a portion of the bracket assembly.

Claim 35. (New) The system of claim 32, wherein:

the at least one cutter comprises a cutting surface having an outer diameter, and an end portion with a bearing surface having an outer diameter larger than the outer diameter of the cutting surface; and

the bracket assembly comprises a bearing surface for rotatably mating with the bearing surface of the cutter.

Claim 36. (New) The system of claim 32, further comprising:

a sleeve;

a bore extending through the sleeve and configured to slidably and rotatably receive the drive shaft; and

a guide member for slidably guiding the sleeve with the bracket assembly.

Claim 37. (New) The system of claim 36, wherein:

the bracket assembly includes an arm portion extending from the frame shaft to a receiver, the receiver sized to slidably support the drive shaft;

the bore is sized to slidably receive the receiver; and

the guide member comprises a slot having a diameter sized to receive the arm portion therethrough.

Claim 38. (New) The system of claim 37, the sleeve further including:

a notch extending radially from the slot.

Claim 39. (New) A bone miller system comprising:

a frame shaft defining a longitudinal axis;

a cutter mount fixedly attached to the frame shaft and defining a cutter mount axis that intersects the longitudinal axis at a first angle;

a shaft alignment bracket fixedly attached to the frame shaft and defining a drive axis, the drive axis substantially parallel to the longitudinal axis;

at least one cutter configured to rotate about the cutter mount axis when the at least one cutter is supported by the cutter mount; and

a drive shaft configured to rotate about the drive axis when the drive shaft is supported by the shaft alignment bracket, and configured to operably couple with the at least one cutter to rotate the at least one cutter about the cutter axis.

Claim 40. (New) The system of claim 39, further comprising:

a shell configured for insertion within a bone cavity and including a shaft cavity configured for sliding reception of the frame shaft.

Claim 41. (New) The system of claim 40, the shell further comprising:

a slot extending along the shell and sized to slidably receive a portion of the cutter mount.

Claim 42. (New) The system of claim 39, wherein:

the at least one cutter comprises a cutting surface having an outer diameter, and an end portion with a bearing surface having an outer diameter larger than the outer diameter of the cutting surface; and

the cutter mount comprises a bearing surface for rotatably mating with the bearing surface of the cutter.

Claim 43. (New) The system of claim 39, further comprising:

a sleeve;

a bore extending through the sleeve and configured to slidably and rotatably receive the drive shaft; and

a guide member for slidably guiding the sleeve with the shaft alignment bracket.

Claim 44. (New) The system of claim 43, wherein:

the shaft alignment bracket includes an arm portion extending from the frame shaft to a receiver, the receiver sized to slidably support the drive shaft;

the bore is sized to slidably receive the receiver; and

the guide member comprises a slot having a diameter sized to receive the arm portion therethrough.